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National Public Works Department Association

This tells why the government should have...

[Washington, D.C.]

[1920?]

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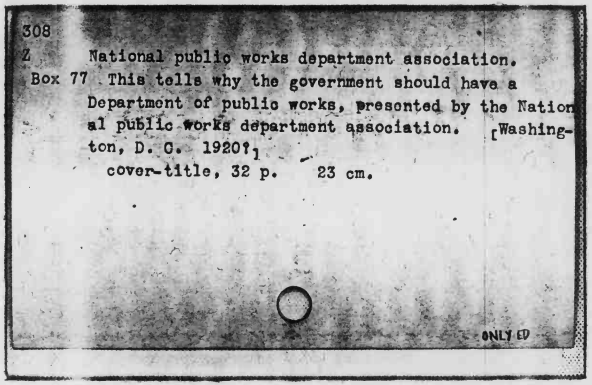

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Office of the President

This Tells WHY
The Government
Should HAVE

A DEPARTMENT OF PUBLIC WORKS

Presented by the

NATIONAL PUBLIC WORKS
DEPARTMENT ASSOCIATION

NATIONAL PUBLIC WORKS DEPARTMENT ASSOCIATION

HEADQUARTERS
502 McLACHLEN BUILDING
WASHINGTON, D. C.

M. O. LEIGHTON, CHAIRMAN
MILTON E. AILES, VICE PRESIDENT RIGGS NATIONAL BANK, WASHINGTON, D. C. TREASURER
C. T. CHENERY, SECRETARY

WHAT IT IS

The National Public Works Department Association is a league composed of national, state and local societies having an aggregate membership of over 100,000 engineers, architects, constructors, manufacturers, chemists, geologists, economists and business men.

ITS PURPOSE

Its purpose is to organize under one department the many and varied public works functions of the Federal Government.

WHY

These functions are now scattered through nine separate departments and 39 bureaus and services. It is this independent operation and competitive relation of like functions which in a large degree renders the Government so wasteful and inefficient in its business conduct. A private business operated in that way would soon become bankrupt.

METHOD

We urge the passage of the Jones-Reavis Bill (S. 2232, H. R. 6649) to create a Department of Public Works, under which the major public works functions will be consolidated and conducted according to the well settled precepts of a modern industrial organization.

19 April 1920 Sen

THE UNDERLYING REASON

The Secretary of the Treasury sent to Congress estimates of appropriations required for the service of the fiscal year ending June 30th, 1921, amounting to $4,473,696,358.32, and this was exclusive of sinking fund requirements for 1920 and Postal Service. Looking over these estimates one fails to find many objects of expenditure that are not needed or that we would not like to have. Yet these estimates must be pruned. Even after this is done our budget will be improvident when our ability to pay is considered.

No one believes that we have reached a point at which we must go without needful things because we are so poor. Pruning of estimates in this case is merely one method of dodging the real issue. The fact is we are paying too much for what we get, and the reason is that the conduct of Government business is wasteful and inefficient. Until we strike at the root of this evil we shall always be pruning.

The proposal to create a department of public works is but the first step in the rationalization of Government business conduct.

INTENTIONAL SECOND EXPOSURE

NATIONAL PUBLIC WORKS DEPARTMENT ASSOCIATION

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502 McLACHLEN BUILDING
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ENDS

TO BE ACCOMPLISHED

The establishment of a National Department of Public Works would do the following things:

See Fact No. 3.

(1) Create an industrial organization out of many functions and thereby make it possible for the Government to conduct its public works business according to the same principles that have made American industries so successful; this will result from:

See Argument No. 14.

(2) Increased efficiency, by bringing under one head and dovetailing into a well balanced machine all works now built or operated for the use of the public; and through this there will be created:

See Fact No. 3. Arguments Nos. 1, 3, 4, 7, 8, 9 and 14.

(3) Large economies. There would be more wise and considerate appraisal of plans, projects and expenditures, the reduced costs that always come with specialized effort and quantity production, and the decrease in overheads that must occur, when separated organizations are amalgamated. There would be less expenditure or greater results for each dollar expended.

See Fact No. 4. Arguments Nos. 9 and 12.

(4) Eliminate rivalry and competition for appropriations and authority between departments and bureaus, which is now placing a large and needless burden on the taxpayer.

See Facts Nos. 20, 22, 24 and 26.

(5) Provide a specialized organization to do technical work for other departments of Government, which are now carrying on such work in an incidental and therefore expensive way.

See Argument No. 7.

(6) Standardization of Government contracts and specifications, for the lack of which the taxpayer is burdened with unnecessary costs and contractors are subject to needless hazards.

See Argument No. 8.

(7) Simplification of specifications for materials, machinery, etc., and elimination of thousands of useless grades, types and sizes, which increase costs and difficulties not only to the Government but to the manufacturer as well.

See Argument No. 5. Fact No. 15.

(8) Provide a complete business organization which can, when war or other emergency comes, be turned instantly to the business at hand.

See Argument No. 11.

(9) Render efficient the establishment and operation of a budget system.

See Argument No. 10.

(10) Serve as a regulator of our national industries because under a rational system of control the Government can speed up its work in dull times and slow down in boom times.

See Argument No. 6.

(11) Provide means for giving to the officers of the Corps of Engineers, U. S. Army, a broader engineering experience than they now have, covering lines required in war conduct.

See Fact No. 6.

(12) Bring the United States into line with the other important countries of the world, all but one of which have departments of public works under a Cabinet Minister.

See Argument No. 14.

(13) Provide for coordinated technical research and create machinery whereby we could compete more nearly on a parity in mechanical matters with the research departments of other great powers.

MEANS

BY WHICH ENDS MAY BE ACCOMPLISHED

To achieve the ends previously set down it is necessary that:

See Facts Nos. 1 and 3.

(1) The engineering and public works functions of the Government now scattered through 9 Federal departments, 35 bureaus and 4 unattached commissions be brought under a single control so that one man or set of men can harness them together and make them work as a team;

See Argument No. 11.

(2) The public works needs of the country be appraised together, each given its proper position with respect to the other, and the public works budget be made up in conformity therewith;

See H. R. 6649, S. 2232, Sec. 7.

(3) The engineering and public works functions be administered and operated by specialists who get and hold their places because of individual merit and who are induced to give their lives to the work because of the importance and magnitude of the service;

(4) A department of public works be established, the head of which shall be a member of the Cabinet—not necessarily an additional executive branch but preferably a readjustment of a branch now existing;

(5) The "Jones-Reavis Bill" (S. 2232; H. R. 6649), which, if put into effect would remove many of the present barriers to efficiency and economy, be passed by Congress;

(6) The thoughtful men and women of the country study and take personal interest in this project of reform, learn of the facts, study the conditions, and thereby create a national consciousness of present inadequacy of Government business methods.

FACTS

1. WHAT FEDERAL AGENCIES NOW PERFORM ENGINEERING AND PUBLIC WORKS FUNCTIONS?

The following list does not include purely military functions.

Agency	Engineering and Public Works Functions
DEPARTMENT OF STATE	
International Boundary Commission, U. S. and Mexico:	Surveys and markings of boundary location.
International (Canadian) Boundary Commission:	Surveys and markings of boundary location.
International Joint Commission United States and Great Britain:	Surveys and investigations concerning the use, obstruction, diversion and pollution of Canada—U. S. boundary waters.
DEPARTMENT OF THE TREASURY	
Supervising Architect:	Construction of public buildings—Postoffices, Custom Houses, Court Houses, Assay Offices, Appraiser's Stores, Marine Hospitals, Quarantine Stations, Immigration Stations, etc., together with maintenance, repair and operation of buildings under the control of the Treasury Department.
Coast Guard:	Construction of Coast Guard stations, houses of refuge, communication lines, ship repairs, etc.
Public Health Service:	Miscellaneous construction in emergency cases. Sanitary engineering work. Docks, hospitals, etc.
DEPARTMENT OF WAR (Civil Work)	
Corps of Engineers:	Improvement and maintenance of rivers and harbors; certain public buildings and grounds in the District of Columbia; the Washington aqueduct and filtration plant; Key Bridge; bridges over navigable streams.
Board of Road Commissioners for Alaska:	Construction and maintenance of military and post roads, bridges and trails in Alaska. Board composed of Engineers, U. S. A.
Great Lakes Survey:	Survey of northern and northwestern boundary lakes. Under Engineer Dept., U. S. A.

Agency	Engineering and Public Works Functions
Mississippi River Commission:	In charge of improvements of the lower Mississippi River. Composed of Army engineers, a member of the Coast and Geodetic Survey and civilian engineers.
Board of Engineers for Rivers and Harbors:	A permanent board of review on all recommendations, reports and projects for river and harbor improvement. Composed of Engineers, U. S. A.
California Debris Commission:	Regulation of the deposit of placer mining debris in certain streams in California for the purpose of preventing obstructions to navigation in Sacramento River. Composed of Engineers, U. S. A.
Construction Division of the Army:	In charge of civil construction and maintenance of structures to be used for primarily military purposes, such as warehouses, shops, cantonments, docks, piers, highways, railways, water supplies, sewerage, fire protection, etc.; operation of utilities.
DEPARTMENT OF JUSTICE	
Superintendent of Prisons:	Construction and maintenance of prisons under the Department of Justice.
POST OFFICE DEPARTMENT	
Fourth Assistant Postmaster General:	General reconnaissance and the compilation and printing of post-route maps.
First Assistant Postmaster General:	Construction of mail tunnels and delivery devices.
DEPARTMENT OF THE INTERIOR	
General Land Office:	Survey, classification, management and disposition of the public lands.
Office of Indian Affairs:	Construction and maintenance of school and other buildings; also of irrigation works and water supplies.
Geological Survey:	Topographic mapping of the U. S.; geology and mineral resources; classification of the public lands; investigations of rivers, water power and underground supplies; including Alaska and certain insular possessions.

Agency	Engineering and Public Works Functions
Reclamation Service:	Construction, maintenance and operation of Government irrigation systems in the arid west, including project water powers, storage, etc.; also investigations of swamp land reclamation projects throughout the United States.
Bureau of Mines:	Investigation of mineral products belonging to and for the use of the United States; treatment of ores; investigation of explosives, safety appliances and prevention of mine accidents; operation of Government fuel yards.
National Park Service:	Supervision, control, maintenance and operation of national parks, including construction of roads, buildings, etc., therein.
Alaskan Engineering Commission:	Construction and operation of Government railroad in Alaska.
Buildings and Grounds:	Maintenance, repair and operation of certain public buildings, including the Capitol and grounds.
DEPARTMENT OF AGRICULTURE	
Forest Service:	Administration and control of National Forests; construction of roads and trails; supervision of waterpower development and lumbering operations; fire prevention and fighting; engineering research in forest products.
Bureau of Public Roads:	Construction and administration of highways under Federal Highways Act; research in road engineering and road materials; irrigation and drainage investigations.
Bureau of Soils:	Surveys and mapping.
Bureau of Animal Industry:	Building construction.
Bureau of Plant Industry:	Building construction.
Weather Bureau:	Building construction, river gaging, climatology, flood warnings; instrument manufacture.
DEPARTMENT OF COMMERCE	
Bureau of Standards:	Consulting and testing engineer to the Government in a wide range of standards, materials and processes.

Agency	Engineering and Public Works Functions
Bureau of Fisheries:	Construction of buildings, dams, and water supplies and maintenance, repair and operation of vessels.
Bureau of Lighthouses:	Construction, maintenance and operation of lighthouses and light ships.
Coast and Geodetic Survey:	The fundamental survey agency of the Government and the final authority for primary control, precise levels, coast waters and charts; builds ships.
DEPARTMENT OF LABOR	
Bureau of Immigration:	Construction of immigration stations.
AGENCIES NOT ATTACHED TO DEPARTMENTS	
Panama Canal:	Construction, maintenance and operation of canal and property.
Interstate Commerce Commission:	Physical valuation of railroad properties.
U. S. Shipping Board:	Construction, maintenance and operation of merchant marine.
U. S. Housing Corporation:	Construction, maintenance and operation of U. S. War housing.
State, War and Navy Building:	Maintenance and operation of S., W. and N. properties.

SUMMARY

The foregoing shows that engineering, architectural and public works functions of related kinds are exercised by:

9 DEPARTMENTS OF GOVERNMENT, OPERATING THROUGH
35 BUREAUS OR SERVICES, TOGETHER WITH
4 AGENCIES NOT ATTACHED TO DEPARTMENTS, OR A TOTAL OF
39 SEPARATE AND DIRECT AGENCIES.

2. WHAT WERE THE APPROPRIATIONS FOR THE ENGINEERING, ARCHITECTURAL AND PUBLIC WORKS FUNCTIONS ABOVE GIVEN IN THE FISCAL YEAR 1920, AND WHAT ARE THE TREASURY ESTIMATES FOR 1921?

(Figures in parentheses in the following table refer to page numbers in the Treasury estimates for 1921—H. D. 411, 66th Congress, 2d Session.)

Agency	Appropriation 1920	Estimate 1921
DEPARTMENT OF STATE		
International Boundary Com., United States and Mexico: (345)	$50,000.00	$45,000.00
International (Canadian) Boundary Commission: (345)	40,000.00	55,000.00
International Joint Commission: (347)	81,000.00	81,000.00
Totals for Department of State	$171,000.00	$181,000.00

Agency	Appropriation 1920	Estimate 1921
DEPARTMENT OF THE TREASURY		
Sec. of Treasury and Supervising Architect for buildings:		
Salaries (44-45)	$221,020.00	$226,920.00
Construction, repair and equipment (509-516)	9,281,550.00	*9,449,796.00
Operation (703-705)	6,505,307.50	7,125,407.50
Totals Sec. of Treasury and Supervising Architect for Bldgs.	$16,007,877.50	$16,801,123.50
Coast Guard:		
Salaries (52-53)	81,110.00	144,630.00
Construction, maintenance and operation (682-686)	7,049,000.00	9,574,508.00
Total for Coast Guard	$7,130,110.00	$9,719,138.00
Public Health Service:		
Salaries (54)	146,530.00	92,970.00
Operations (692-701)	8,225,500.00	14,741,975.00
Totals for Public Health Service	$8,372,030.00	$14,834,945.00
Totals for Dept. of the Treas.	$31,355,206.50	*$41,355,206.00
DEPARTMENT OF WAR		
Corps of Engineers:		
Salaries (civilians) (88)	†$112,510.00	†$112,510.00
Rivers and Harbors (569-577)	*‡40,598,364.00	*‡53,659,265.00
Operating and care, etc., rivers and harbors (995-996)	2,594,600.00	4,444,600.00
Prevention of deposits in New York harbor (742)	100,260.00	122,985.00
Key Bridge, D. C. (742)	200,000.00	500,000.00
Public Buildings and Grounds in and around Washington (563-568)	687,895.00	1,405,850.00
Salaries (91-92)	106,446.00	121,828.00
Washington Aqueduct	159,000.00	153,000.00
Alaskan Road Commissioners (386)	100,000.00	100,000.00
Great Lakes Survey (739)	125,000.00	170,000.00
Board of Engineers on Rivers and Harbors	Included under Rivers and Harbors	
Mississippi River Commission	Included under Rivers and Harbors	
California Debris Commission (741)	15,000.00	18,000.00
Total under or in connection with Corps of Engineers	$44,790,075.00	$60,808,038.00
Construction Division	‡45,000,000.00	‡38,500,000.00
Total for War Department	$89,790,075.00	$99,308,038.00

* Congress may decide to appropriate more under a specific act.
† Both military and civil purposes.
‡ Does not include salaries of commissioned officers of the army.

Agency	Appropriation 1920	Estimate 1921
DEPARTMENT OF JUSTICE		
Superintendent of Prisons (656)	$202,000.00	$195,000.00
POST OFFICE DEPARTMENT		
Mapping (667)	$16,893.20	$18,000.00
DEPARTMENT OF THE INTERIOR		
Public Buildings and Grounds (115, 117, 128, 608-610)	$425,040.00	$2,525,865.00
General Land Office:		
Salaries, etc. (118-119)	679,870.00	688,870.00
Surveyors General (129-135)	223,870.00	221,465.00
Expenses (769-774)	2,099,500.00	2,225,500.00
Total for General Land Office	$3,003,240.00	$3,135,835.00
Office of Indian Affairs:		
Construction and engineering segregated (427-502)	1,789,859.15	4,278,533.44
Geological Survey:		
Printing and Engraving (677)	125,000.00	175,000.00
Expenses (774-788)	1,461,353.50	2,592,920.00
Reclamation Service (650)	7,511,000.00	20,134,000.00
Bureau of Mines (802)	1,201,897.00	1,655,880.00
National Park Service (806-825)	754,205.00	2,345,867.00
Alaskan Engineering Commission	10,002,380.00	Not yet submitted
Total for Dept. of Interior	$29,277,214.65	$39,979,735.44
DEPARTMENT OF AGRICULTURE		
Forest Service (246-260)	$5,966,869.00	$6,557,895.00
Roads	4,427,954.75	4,500,000.00
Bureau of Public Roads (308)	594,320.00	748,120.00
Post Roads Appropriation	100,000,000.00	100,000,000.00
Bureau of Soils:		
Soils investigations and maps (271)	198,200.00	231,400.00
Bureau of Animal Industry	No estimates for construction described as such given in this year's budget.	
Bureau of Plant Industry		
Weather Bureau (202)	1,880,210.00	2,228,150.00
Totals for Dept. of Agriculture	$113,067,553.75	$114,265,565.00
DEPARTMENT OF COMMERCE		
Bureau of Standards (157-177, 861-862)	$1,532,170.00	$3,246,940.00
Bureau of Fisheries (848-861), fleets buildings and hydraulic construction segregated	154,500.00	387,825.00
Bureau of Lighthouses:		
General salaries (146)	65,430.00	79,668.00
Salaries and expenses (831-839)	6,625,000.00	8,305,000.00
Construction, etc. (651-655)	354,400.00	6,759,900.00
Totals for Bureau of Lighthouses	$7,044,830.00	$15,144,568.00
Coast and Geodetic Survey (841)	1,638,280.00	3,737,231.00
Totals for Dept. of Commerce	$10,369,780.00	$22,516,564.00

Agency	Appropriation 1920	Estimate 1921
DEPARTMENT OF LABOR		
Bureau of Immigration (655)	$175,000.00	$1,198,500.00
AGENCIES NOT ATTACHED TO DEPARTMENTS		
Panama Canal (607)	$9,829,837.00	$18,245,391.00
Interstate Commerce Commission:		
Physical Valuation of Railroads (720)	2,500,000.00	1,750,000.00
U. S. Shipping Board (725)	356,000,000.00	446,270,652.00
U. S. Housing Corporation (728)	2,068,970.00	1,203,028.00
State, War and Navy Buildings	2,387,038.75	2,329,550.00
GRAND TOTAL	$647,210,568.85	$788,816,229.44

3. WHAT IS REQUIRED TO SECURE EFFICIENCY AND ECONOMY IN THE CONDUCT OF BUSINESS OPERATIONS?

(a) [Contrast with Fact No. 1.] The operations must be under a single control and always responsive thereto.

(b) The operations must then be organized according to specialized functions, the same or similar functions wheresoever exercised to be performed under the jurisdiction and according to standard procedure of a specialized branch of the organization.

(c) All self-contained agencies should, so far as practicable, be avoided —in other words, there should not, except under unusual conditions, be any unit of the organization that has within itself and responsible only to itself all the functions necessary to a final product.

(d) The product must be a composite of the expert knowledge and performance of the several specialized branches, each adding its contribution and all in dovetail.

(f) Each specialized branch should operate and produce as to time, quantity, quality and dimensions, according to the capacity of every other branch and every branch should be adjusted according to the standardized capacity of the whole organization, so that there will be no over-production by any one nor any appropriation or expenditure that does not merge itself into composite product.

(g) The most common and persistent drains on any industrial organization are the overheads and therefore the non-productive expenditures should be kept low.

(h) Standardized methods and standardized materials, in the fewest possible grades and dimensions are necessary to economy.

(i) "Quantity production" must be achieved wherever possible.

All these are axiomatic in the conduct of modern industry.

4. HOW DOES THE CONDUCT OF GOVERNMENT PUBLIC WORKS FUNCTIONS DEPART FROM THE FOREGOING?

Every one of the precepts is violated. Almost every agency is "self-contained" and there are many separate and independent agencies doing the same thing. Let it be emphasized that the important wastes and losses arising from duplication are not those brought about by the actual doing of the same thing by two agencies, but by the upkeep and "readiness to serve" expense of these agencies. There is costly duplication even if the two are idle.

The following statement shows the common public works and engineering functions exercised by the several Government agencies heretofore named:

Government Agency	Building Construction	Road Construction	Hydraulic Construction	Engineering Research	Surveying—Mapping	D. C. Bldgs. and Grounds	Coast Fleets	Work on Rivers	Public Land Functions	Chemical Investigations	Remarks
Dept. of State											
Mexico Boundary Comm.	--	--	--	--	x	--	--	--	--	--	Has done Engr. research.
Canada Boundary Comm.	--	--	--	--	x	--	--	--	--	--	
Int. Joint Bound. Comm.	--	--	--	x	x	--	--	x	--	x	
Dept. of the Treasury											
Supervising Architect	x	--	--	x	--	--	--	--	--	--	The principal Bldg. construction agency.
Coast Guard	x	--	--	--	--	--	x	--	--	--	Has both marine and land service.
Public Health Service	x	--	x	x	x	--	--	--	--	x	Builds hospitals, barracks, docks, sea walls, etc.
Dept. of War											
Engineers	x	x	x	x	x	x	x	x	x	--	
Alaska Road Comm.	--	x	--	--	x	--	--	--	x	--	
Lakes Survey	--	--	--	--	--	--	--	--	--	--	
Mississippi River Comm.	x	--	x	x	x	--	--	x	--	--	
B'rd of Engrs. for Riv. & H.	--	--	--	--	--	--	--	x	--	--	
Calif. Debris Comm.	--	--	x	x	x	--	--	x	--	x	Has built dams.
Construction Div., U.S.A.	x	x	x	x	x	--	--	--	--	--	
Dept. of Justice											
Supt. of Prisons	x	x	x	--	--	--	--	--	--	--	
Post Office Dept.											
4th Asst. P. M. General	--	--	--	--	x	--	--	--	--	--	Maps are compiled; no surveys made.
Dept of the Interior											
Land Office	x	--	--	--	x	--	--	--	x	--	
Indian Affairs	x	x	x	--	x	--	--	x	x	--	Reclamation Service does a large part of Indian Irrigation construction.
Geological Survey	--	--	x	x	x	--	--	x	x	x	
Reclamation Service	x	x	x	x	x	--	--	x	x	x	
Mines	x	--	--	x	x	--	--	--	x	x	
National Parks	x	x	x	--	x	--	--	x	x	--	
Alaskan Engineer's Comm.	x	x	x	x	x	--	--	x	x	--	
Buildings and Grounds	x	x	--	x	--	x	--	--	--	--	
Dept. of Agriculture											
Forest Service	x	x	x	x	x	--	--	x	x	x	
Public Roads	--	x	--	x	x	--	--	--	--	x	
Bureau of Soils	x	--	--	--	x	--	--	--	--	x	Has built a fertilizer plant.
Plant Industry	x	--	--	--	--	--	--	--	--	x	Builds greenhouses.
Animal Industry	x	--	--	--	--	--	--	x	--	x	B'lds barns and cattle pens.
Weather Bureau	x	--	x	x	--	--	--	--	--	x	Builds observatories and local stations.
Dept. of Commerce											
Bureau of Standards	x	x	x	x	--	--	--	--	--	x	
Fisheries Bureau	x	x	x	--	--	--	x	x	--	x	Occasional building Cons.
Lighthouse Bureau	x	x	x	x	--	--	x	x	--	--	
Coast Survey	--	--	--	x	x	--	x	x	--	--	
Dept. of Labor											
Bureau of Immigration	x	--	--	--	--	--	--	--	--	--	
Panama Canal	x	x	x	x	x	--	--	x	--	--	
Interstate Com. Comm.	--	--	--	x	x	--	--	--	--	--	
U. S. Shipping Board	x	x	x	x	x	--	x	--	--	x	
U. S. Housing Corporation	x	x	x	--	x	--	--	--	--	--	
State, War and Navy Bldg.	x	--	--	--	--	x	--	--	--	--	
Totals	27	16	19	22	25	3	6	16	10	15	

Not all the agencies listed on the foregoing table have permanent construction personnel. When appropriations are made for construction some of them are obliged to create temporary organizations—always wasteful and costly.

An Example of Duplication

Take building construction as an example and contrast the showing with the principles set down in the answer to Question 3.

Government buildings are constructed under 7 executive departments and 4 unattached agencies.

Authority to build is conferred by Congress on 27 separate and distinct agencies of Government;

27 construction organizations, some permanent and some temporary, some in a high state of specialized competence and the most of them not;

27 separate respositories of experience, the composite of which should be available to the whole Government every time and wheresoever it builds;

27 organizations competing before Congress for appropriations, each in disregard of the possibility that the needs of every other may be more deserving; also in disregard of the possibility that two or more of these agencies might combine to advantage on a site and a structure; also in disregard of the possibility that even as to separate structures there may be common needs for materials which, with orders combined, may give the country the benefit of the low costs due to "quantity production;"

A large number, if not actually 27, sets of specifications with hundreds of needless variations as to grade, finish and dimension of material which largely increase costs;

27 organizations competing in the market for materials and labor without thought of proper sequence of operations to fit and to take advantage of market conditions;

27 interrogation points as to underestimates and calls for deficiency appropriations;

These conditions alone would bankrupt the strongest private business organization that ever existed. They can continue only under a regime in which taxes are **levied.**

The estimates for 1921 provide for public building operations costing about $27,000,000.00. This does not include a large amount covered in lump sum estimates, nor additional projects that may be adopted in a "Public Buildings Bill."

There are many well qualified men in the country who would guarantee that if they were allowed a free hand to consolidate and organize these 27 separate building agencies as a business man would organize them in his private business, 10 per cent would be saved.

There are many others who, being familiar with the wastes and inefficiencies of Government "unorganization" can considerately estimate a saving of from 20 per cent to 30 per cent under rational organization. This showing is on building construction alone. Facts concerning other activities will be taken up in a subsequent section.

5. IS THE CONDITION ABOVE RECITED PECULIAR TO THE ENGINEERING AND PUBLIC WORKS FUNCTIONS?

No, it is chronic in nearly all other functions lines of Government activity, but the first named are now the focus of attention because:

(a) It would be a gigantic task to rationalize all Government business conduct in one measure;

(b) The knowledge of how to do it can come only with experience and observation as to one branch, and after that has set the example other reforms will fall in line by reason of the logic of events;

(c) The engineering and public works functions are the most tangible of all and therefore the most readily adjusted.

6. IS THIS PUBLIC WORKS CHAOS PECULIAR TO THE UNITED STATES?

Practically so. Other countries have long since corrected these evils. Public works departments have been set up in the countries designated below, and the scope of their authority is substantially as shown.

Scope of Public Works Departments in Other Countries

	All Pub. Constr.	Bridges	Ferries	Rivers	Harbors	Highways	Buildings	Railroads	Mines	Irrigation	Drainage	Surveys	Water Power	Telephones	Telegraphs	Lands	Forests	Postoffices	Lighthouses	Tech. Schools	Forts	Churches	Arsenals	Patents	Sanitary Works	Fisheries
Argentina	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Brazil	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Canada	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Chili	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Denmark	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
France	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Italy	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
New Zealand	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Norway	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Peru	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Prussia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Spain	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sweden	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

NOTE: England's Department of Public Works has jurisdiction over public buildings, forests, grounds, parks and monuments. Rivers, harbors, docks, etc., are under the Board of Trade. Other public works, such as highways, bridges, drainage, etc., are all under local jurisdiction.

The departments of public works in Sweden, Norway and Denmark were created by rearranging the functions of the department of the interior in somewhat the manner proposed by H. R. 6649, S. 2232.

7. THE JONES-REAVIS BILL (H. R. 6649, S. 2232) COVERS ONLY A PART OF THE ENGINEERING AND PUBLIC WORKS FUNCTIONS OF THE GOVERNMENT. WHY SO LIMITED?

Because:

(a) Some of the functions omitted from the terms of the bill are beset with certain complications which should be straightened out before decision is made as to the manner of their inclusion in a new department;

(b) It is wise to start conservatively in making any fundamental change in a big organization, and by concentrating on a few things demonstrate the truth of the principle so thoroughly that the remainder will fall into line almost automatically.

8. THE JONES-REAVIS BILL (H. R. 6649, S. 2232) DOES NO MORE THAN TO PLACE CERTAIN BUREAUS UNDER ONE DEPARTMENT. IT MAKES NO SPECIFIC PROVISION FOR THEIR IMMEDIATE AMALGAMATION. WHY?

Solely by reason of expediency. Any detailed coordination set. up made today without experience and observation of these bureaus while working under one roof will surely misfit in many respects. So little is known by any one man or group of men concerning the present or possible intimate inter-relations between these bureaus that the final objective—economy—will be achieved sooner if they are for a brief season allowed to jostle around in one enclosure. The answer to many moot questions will then be apparent. Each function will find its own logical position and there will be almost automatic adjustment. Moreover, many absurdities can be corrected and many economies achieved easily and lawfully by Executive or Departmental Order. Thereafter the head of the new department can present the facts and findings to Congress and supplemental legislation can be enacted in accordance therewith. In transforming departments from inefficient and wasteful to economical and businesslike agencies no man is wise enough to take more than one step at a time.

9. WHY THE NAME "DEPARTMENT OF PUBLIC WORKS?"

"Public Works" leads to some misconception of scope. It or its equivalent in other languages has been adopted all over the world to embrace tangible property owned by the Government or that over which the Government has sovereign jurisdiction, together with functions and activities related thereto and necessary to public utility. In many cases it is impossible to distinguish sharply between public works functions and others because certain bureaus which exercise public works functions in the main have also attached, as a necessary part of their activities, certain functions which, considered by themselves, would not be public works functions, but which must expediently be carried into a public works department.

10. WHY DOES THE JONES-REAVIS BILL PROPOSE TO TRANSFORM THE DEPARTMENT OF THE INTERIOR INSTEAD OF CREATING AN ADDITIONAL CABINET OFFICE?

Because there are already enough executive departments to perform Government business well if the several functions were properly coordinated. This being the case additional departments merely create large overhead charges, induce inefficiency and render operation cumbersome. The Interior Department was chosen as the nucleus of a public works department because the larger proportion of its activities relate to public works.

11. WHAT REMAINS OF THE DEPARTMENT OF THE INTERIOR AS A NUCLEUS FOR THE DEPARTMENT OF PUBLIC WORKS AFTER THE SIX BUREAUS DESIGNATED IN SECTION 3 OF THE BILL HAVE BEEN TRANSFERRED?

The General Land Office, Geological Survey, Reclamation Service, Bureau of Mines, National Park Service and Alaskan Engineering Commission.

12. WHAT ARE THE REASONS FOR THE VARIOUS ASSIGNMENTS GIVEN TO BUREAUS IN SECTION 3 OF H. R. 6649, S. 2232?

The proponents of the bill have no pride of opinion relative to the several assignments and they do not claim any particular qualifications to give advice in the matter.

In the case of the Patent Office they recognize that this agency is a great factor in commerce and industry and therefore may properly be taken over by the Department of Commerce.

The Bureau of Pensions is a purely fiscal agency and as such appropriately belongs to the fiscal department of the Government.

The Bureau of Education was suggested for allocation to the Department of Labor because that department does not confine itself to labor matters but already has certain social service functions. Education is a matter of social service. Much objection has been raised to this proposed transfer and the proponents of the bill are free to admit that it may wisely be placed elsewhere.

The Bureau of Indian Affairs has the main purpose of educating the American Indian, now a ward of the Nation, providing for his social welfare, and eventually making of him a citizen. Its principal functions are therefore education and labor, and when these objects are accomplished the Bureau of Indian Affairs will automatically go out of existence. The proponents of the bill therefore think that the proper place for Indian Affairs is in some department where social service is the prime purpose, but the point is not essential to the carrying out of the proposal for a department of public works.

The St. Elizabeth's Hospital and the Freedman's Hospital should obviously be attached to some Federal organization which functions primarily on health matters; therefore the Public Health Service has been suggested.

The Columbia Institution for the Deaf and the Howard University are obviously educational institutions and should therefore be attached to the Government agency having to do with questions of education.

13. WHY DOES THE BILL PROPOSE TO DIVIDE THE CONTROL OF THE DUTIES OF THE OFFICE OF INDIAN AFFAIRS?

The main purpose of the office, as above stated, is the raising of individuals to a state of citizenship. The engineering and public works functions involved therein are incidental and may most effectively be carried out by a specialized agency acting in a contract capacity. Indian Affairs estimates for 1921 aggregate $12,994,494.27, of which only $4,278,533.44 covers engineering and construction and maintenance of buildings and other utilities, especially irrigation. The greater part of this irrigation work is now and has for several years been performed by the Reclamation Service.

Therefore the present proposal does little more than to continue an advantageous arrangement already in effect. The same principle should be made to apply to the building construction, and such an arrangement would be merely a copy of that which has been in existence for many years under which postoffice buildings, court houses, etc., have been constructed by the Supervising Architect of the Treasury.

14. EXPLAIN THE DISPOSITION MADE OF THE CORPS OF ENGINEERS, U. S. ARMY, UNDER SECTION 4B, OF H. R. 6649, S. 2232.

There are two reasons:

(a) To secure very large economies not only with respect to rivers and harbors operations, but also through Federal operations having to do with rivers, such as irrigation, water power, drainage, etc.;

(b) To confer great benefit on and increase the usefulness of the Corps of Engineers, especially in time of war. This is discussed under Argument No. 6.

15. WHY DOES THE BILL PROPOSE TO INCLUDE THE CONSTRUCTION DIVISION OF THE ARMY IN THE DEPARTMENT OF PUBLIC WORKS?

Because:

(a) This division is made up almost entirely of civilian engineers highly experienced in construction work who have, in connection with the war emergency, performed the most extensive and remarkable achievements in engineering construction ever performed by any one organization in the history of the country;

(b) It has worked out a most effective plan of organization and operation which is in a large degree responsible for the results achieved and which could be amalgamated most efficiently with many of the peace-time construction operations of the Government;

(c) The War Department has not provided for the perpetuation of this organization, as such, in its plan for a new military establishment, which is now the subject of investigation by Congress, and at least by inference proposes to allow the Construction Division to lapse or to merge its functions with certain old-line military departments, where it will be in an environment entirely foreign to the spirit and practice which have caused it to be so unqualifiedly a success;

(d) The construction work which this Division has accomplished is for the most part, not military engineering at all, and the only military significance which it has is derived from the subsequent utilization thereof for military purposes. There is no more reason why the construction of a warehouse, a depot or a dock for the Army can not be executed by an established construction organization not connected with the Army than there is for the contention that a Federal court house should be constructed by the Department of Justice, instead of, as in the past, by the Supervising Architect's Office of the Treasury;

(e) When the United States entered the great war it was necessary to organize the Construction Division under an extreme emergency attended by costly delay, and there should be an active, going construction organization in the service of the Government, which in the case of a future war, could be made to function at an instant's notice as a construction branch of the military establishment. The only way by which this can be accomplished is to have such an organization in active practice in peace-time work.

16. WHY DOES THE BILL PROPOSE TO INCLUDE THE FOREST SERVICE IN THE DEPARTMENT OF PUBLIC WORKS?

While it is true that the science of forestry so far as its sylvicultural aspects are concerned, is an agricultural science the real problem of operation and maintenance of national forests under the conditions prevailing in this country, are more truly related to engineering than to agriculture. In the first place, forest reserves are unquestionably public works. They are properties owned by the Government and set apart for public purposes. Second, the harvesting of lumber, fire prevention, the construction of roads and trails, the conservation of water, and the administration of water powers are unquestionably engineering operations.

The estimates for the Forest Service, fiscal year 1921, aggregate $11,057,895.00. Of this amount the sum of $145,640 is for the purpose of seeding and tree planting, $153,728 is for sylvicultural, dentrological and other experiments, and $59,920 for miscellaneous forest investigations. The remainder of the estimate is made up of items for general salaries, ranger service, maintenance, improvement, protection and general administration, classification of lands, fire fighting and prevention, forest products engineering, experiments and investigations of range conditions, lumbering operations, and roads and trails—all of which are either entirely or in a large sense engineering and public works functions.

There is yet a third phase of the subject which is perhaps more important than the other two from the standpoint of efficient public administration. The Jones-Reavis Bill retains within the proposed department of public works certain bureaus of the Interior Department which have largely to do with public lands. These are the General Land Office, the Geological

Survey, the National Park Service, the Reclamation Service, and the Bureau of Mines. These services are concerned in a more or less intimate way with public land boundaries, surveys and the classification of the land for one or another purpose under the public land laws. It is of unquestionable advantage and productive of large economies to have these bureaus under one roof. The Forest Service, however, has quite as intensive relation to public land matters as has any of the other bureaus above mentioned. Therefore, in view of the multiplicity of engineering functions necessarily comprised in the administration of forest reserves, together with the obvious public advantage of coordination in land administration, there seems to be no question that distinct public advantage could be gained by including the Forest Service in the department of public works, notwithstanding the fact that one of the important functions of such a service is pure forestry.

17. WHY DOES THE BILL PROPOSE TO INCLUDE THE BUREAU OF STANDARDS IN THE DEPARTMENT OF PUBLIC WORKS?

The Bureau of Standards is an engineering and scientific body. Its executives, staff and personnel are all engaged in engineering or research. It performs large services to industry, but to assist industry is the end of all engineering. In the Department of Commerce the Bureau of Standards is tied up with such other bureaus as Foreign and Domestic Commerce, Fisheries, Bureau of Navigation, Steamboat Inspection Service and the Bureau of Census. The Department of Commerce is not a scientific but a trade department. The Secretary of this department is chosen for his interest in trade and rarely has he a proper appreciation of the work and requirements of such a bureau as the Bureau of Standards.

One of the primary objects of the department of public works is to coordinate the engineering research of the Government. One of the assistant secretaries of the proposed department is specifically charged with supervision over such research. The Bureau of Standards would find itself, if transferred to the public works department, in a scientific atmosphere, where it would be grouped with bureaus whose interests were along similar lines. It would be under a Secretary who by training and experience could appreciate its problems, and it would find its activities stimulated and its scope enlarged through the sympathy and understanding of the department heads.

The Bureau of Standards acts as consulting engineer to the various Government departments. Its functions are development, construction, custody and maintenance of reference and working standards and their intercomparison, improvement and application in science, engineering, industry and commerce. Its work on standards is further divided into five major departments.

1. Standards of measurement.

2. Standard constants, such as mechanical equivalents of heat, light, electricity and of gravitation, specific densities, viscosities, melting and boiling points, etc.

3. Standards of quality, which include specifications for material by description, sample or both, fixing in measurable terms groups of properties which determine the quality.

4. Standards of performance—specification of operative efficiency or action for machines and devices, specifying the factors involved in terms susceptible of measurement.

5. Standards of practice—codes and regulations impartially analyzed and formulated after study and experiment into standards of practice for technical regulation and construction, installation, operation and based upon standards of measurement, quality and performance.

18. WHY DOES THE BILL PROPOSE TO TRANSFER THE COAST AND GEODETIC SURVEY TO THE DEPARTMENT OF PUBLIC WORKS?

This is the fundamental survey organization of the Government—an engineering bureau pure and simple. While its coast charts are adjuncts to commercial operations they have many other fundamental engineering and public works uses. Moreover the Coast and Geodetic Survey has for years been conducting the precise level operations of the country and the primary

control with respect to precise location. The majority of the construction activities of the Government are based on these data and the whole accomplishment is part and parcel of the public works functions.

19. WHY DOES THE BILL PROPOSE TO PLACE THE BUREAU OF PUBLIC ROADS IN THE DEPARTMENT OF PUBLIC WORKS?

This is strictly an engineering bureau and the highways of the country are a part of the public works, not only as to engineering construction, but as to mapping, investigation of road materials and transportation. Road building is not more closely related to the main purpose of the Department of Agriculture than to those of the departments of Commerce, Labor, War, or the Post Office. In fact, the appropriations of the Bureau of Public Roads are carried in the Post Office bill. It should be emphasized that the proposal to include this bureau in a department of public works has no necessary interference with any proposal now before Congress creating a system of internal administration different from that which now exists. Whatever be the form of organization of this bureau that commission, board or directorate should head into the related functions in the department of public works.

20. WHY ARE THERE THREE INTERNATIONAL BOUNDARY COMMISSIONS NOW SUBORDINATE TO THE DEPARTMENT OF STATE NOT INCLUDED UNDER THE JONES-REAVIS BILL?

The main questions before these commissions are diplomatic ones. The engineering functions are subordinate. After a Department of Public Works has been established it will logically occur that the specialized mapping and boundary work of these international commissions will be performed by the new department under a contractural relation. It is not conceivable in any event that the engineering work of these commissions will be indefinitely prolonged.

21. WHY DOES THE JONES-REAVIS BILL FAIL TO INCLUDE THE COAST GUARD IN THE DEPARTMENT OF PUBLIC WORKS?

There are important questions of public policy with respect to the Coast Guard which should be more carefully considered before any definite disposition is made of that bureau. Strong arguments are made in some quarters that it should become a part of the Navy, and there are also good reasons for believing that it should be consolidated with the Lighthouse Bureau. These questions of public policy can be settled in their own time and while progress to that end is being made there is no reason why the creation of a department of public works should be deferred nor should the consideration and debate on the latter be complicated with the vexing questions as to the former.

22. WHY DOES THE JONES-REAVIS BILL FAIL TO INCLUDE THE PUBLIC HEALTH SERVICE IN THE DEPARTMENT OF PUBLIC WORKS?

There are many who believe it should not, but at present the functions of the Public Health Service are overwhelmingly medical, or closely related thereto. Moreover, this service is still in a state of expansion and transition. Its field is wide and its functional relations will be far better defined in a few years hence than they are now. At present its engineering work is a minor character when compared with the main purpose of the service. Therefore it seems best to avoid introducing the uncertainties and complications into the consideration of a public works measure.

23. WHY DOES THE JONES-REAVIS BILL NOT INCLUDE IN A DEPARTMENT OF PUBLIC WORKS CERTAIN FUNCTIONS OF THE CORPS OF ENGINEERS, U. S. ARMY, SUCH AS PUBLIC BUILDINGS AND GROUNDS, D. C., WASHINGTON AQUEDUCT, KEY BRIDGE, GREAT LAKES SURVEY, AND BOARD OF ROAD COMMISSIONERS FOR ALASKA?

These are relatively small functions. For a period of two years subsequent to the enactment of this bill much attention would have to be given to an orderly transfer of rivers and harbors functions from the Corps of Engineers to the new department. While this is going on it would be much simpler and more expedient to allow these small functions to continue with the Corps of Engineers until the large transfer is made and adjusted, at which time Congress can give consideration to the minor functions.

24. WHY DOES THE JONES-REAVIS BILL FAIL TO INCLUDE THE WEATHER BUREAU IN THE DEPARTMENT OF PUBLIC WORKS?

The main functions of this bureau are not engineering in character. Its climate and crop service has a close relation to agriculture and its storm warnings to commerce. While certain of its functions, like the occasional construction of buildings, the operation of river gages, etc., are of an engineering and public works character, they may well be left undisturbed until the new department is in operation, at which time suitable disposition of them can be made.

25. WHY DOES THE JONES-REAVIS BILL FAIL TO INCLUDE THE BUREAU OF LIGHTHOUSES IN THE DEPARTMENT OF PUBLIC WORKS?

See remarks under Coast Guard, Question No. 21.

26. WHY DOES THE JONES-REAVIS BILL FAIL TO INCLUDE THE BUREAU OF FISHERIES IN THE DEPARTMENT OF PUBLIC WORKS?

The engineering construction work of this bureau is a relatively unimportant part of its activities. The main functions are biological. When a department of public works has been established the construction work of the Bureau of Fisheries can, if desired, be performed by the new department in a contract capacity.

27. WHY DOES THE JONES-REAVIS BILL FAIL TO INCLUDE THE PUBLIC WORKS AGENCIES NOT NOW ATTACHED TO DEPARTMENTS?

The Panama Canal is a highly developed self-contained institution far removed from the continental United States, and at present there are no apparent advantages to be gained in the way of economy or efficiency by making this property subordinate to any department. Its proper relation to the departmental organization of Government will be more easily determined after the lapse of a few years when the Canal property has settled down into its routine as an adjunct to commerce.

The physical valuation work of the Interstate Commerce Commission is presumably temporary in character, and while it has its dominating engineering features questions of law and economics are also involved, and it would not appear at present that any advantage would be gained by transfer.

The future of the U. S. Shipping Board is uncertain as to its engineering and public works functions. These have become prominent largely by reason of the war emergency. It may occur that the future shipping board will be a body almost exclusively devoted to purely commercial matters.

The U. S. Housing Corporation is a temporary organization, the dissolution of which is even now being actively considered.

The operations known as "State, War and Navy Building" should eventually be under the Department of Public Works, but at present their

situation is identical with the minor functions of the Corps of Engineers, such as Public Buildings and Grounds and Washington Aqueduct. See Question No. 23 above.

28. WHAT IS THE ORIGIN OF THE PRESENT MOVEMENT TO ESTABLISH A DEPARTMENT OF PUBLIC WORKS?

It has been a matter of study among the engineers of the country for more than 40 years. Various attempts have been made in Congress to secure the passage of necessary legislation. The wastes and inefficiencies of the present system of public works management have been manifest from the beginning, but the consequences have grown in magnitude along with the increase in number and scope of the public works functions assumed by the Nation.

There was a time when the question most debated was whether the Nation should assume these functions, and in the absence of a definite policy in this respect there was little thought of or inducement for the creation of a suitable organization. At present there may be as much disagreement as formerly concerning the propriety of allowing the Nation to indulge in such functions, but the fact is that the functions have been assumed. Whether we like it or not, the Nation has gradually adopted a Federal public works policy. As the various functions have been assumed each has "been stuck in somewhere." The reasons for the several allocations are many and various. Few of them have been severely logical.

The hodge-podge that has resulted from the gradual assumption of functions is certainly not the arrangement that a sane business man would put into operation and if the Government should wipe off the slate and start all over again it would undoubtedly follow rational business ideals. The result of the present arrangement, especially with relation to the Nation's finances as suggested in the foreword hereto, has become exceedingly grave. The attention of the country has been concentrated on it by the direct system of taxation, which has been put into effect in recent years, whereas the expenses of the country were formerly paid by indirect taxation. Every man of earning capacity now gets a bill for his share of the Nation's expenses. From now on the voting citizen will be guided more directly by the size of that bill than by any other political issue, except, of course, in times of National emergency.

As a result of this new aspect of things and in conformity with previous convictions as to the business conduct of the Government there met in Chicago in April, 1919, a convention of delegates from engineering, architectural, manufacturing and business men's organizations representing 74 societies and 105,000 members. A permanent federation was organized which was originally known as Engineers, Architects and Constructors Conference on National Public Works. The organization has since that time broadened in its scope of membership and the name has been changed to National Public Works Department Association. The work of this organization is based on the following resolution, passed at the Chicago convention:

"This conference of the delegates from engineering and related organizations respectfully recommends to the public and to Congress that legislation be enacted covering the following principles:

"1. That the services and bureaus of the National Government, having to do chiefly with matters of engineering and architecture, be grouped in one department to be known as the Department of Public Works.

"2. That the Department of Public Works comprise those works which are built and operated for the use of the public.

"3. That the Department of Public Works be made available when desirable for the performance of special engineering and architectural work for the use of other Government bureaus.

"4. That there be a systematic classification and organization of engineers, architects and other employees whose status shall be such that they may be recruited and maintained on merit."

Attention should be directed to the fact that the delegates to the Chicago convention and the 105,000 men whom they represent constitute a body

of as substantial, progressive and thoughtful individuals as could be asembled in the country. They have no axes to grind and no personal benefits to achieve. The large majority of the men represented were engineers, and it is significant that although the successful outcome of this movement would markedly reduce the number of engineering positions required in Government service, the project has received the practically unanimous support of American engineers. The same statement is true with respect to the architects and other technical men whose professions are now represented on the Government payroll. In other words, this is a project backed by enlightened patriotism and an unselfish desire to secure an improvement in the conduct of Government business; to prevent wastes, to increase efficiency, and to secure economy. The project is not the product of momentary enthusiasm, nor has it those popular characteristics which would appeal to the man on the street. The fundamental principles are the result of the mature thought of well qualified men, extending back over a period of more than 40 years, and it finds its present intensified expression by reason of the revelations of Government business inefficiency made apparent by reason of war exigencies.

ARGUMENTS

1. ON ORGANIZATION

All modern industrial prosperity depends on efficient organization based on principles set down in Fact No. 3. This is the fundamental argument for a National Department of Public Works. The most conspicuous factor in the development of industries during the past 20 years has been that of consolidation of like functions, the elimination of overheads, the prevention of wastes and the increase of efficiency. These factors lie at the base of "big business." Even the most pronounced opponent of big business recognizes its economies. The effort to establish a department of public works is simply an effort to give to the Government the same advantages that have been seized in the private business world. Much space might be utilized in developing the case for organization as demonstrated in the conduct of business, but as these features have, by practical demonstration, become axiomatic one needs but to examine Fact No. 1, herein, to prove the case against the present conduct of Government business.

2. ON THE REASONS FOR BAD GOVERNMENT ORGANIZATION

This has already been touched upon under Fact No. 28. The public works functions of Government have attained their present form and size not by reason of deliberate and well directed organization, but entirely through accretion. As the family of Federal functions has grown the house has been increased in size to accommodate—a lean-to here and a gable there. All of this has taken place without coordination of any kind until now the house is a maze, affording neither efficient operation nor structural unity. The whole set up is inelastic and can not possibly adapt itself to concerted work. No one believes that all of the Government organizations included in Fact No. 1 can be merged according to the character of their several functions. Obviously some are highly specialized activities that must be closely tied into certain other and different activities, but this does not justify the existing extreme of diversification and competition between Federal departments. As previously stated, Federal functions, as they have been assumed, have "been stuck in somewhere." The time and energy of Congress have necessarily been directed to the framing of details covering specific operations. The fact that it is frequently necessary to stand off and get perspective on the structure as a whole has been crowded out by more pressing considerations. Thus the evil has grown—naturally and without general intent—and it has been intensified by the laudable ambition of departmental heads and bureau chiefs to make their organizations large, powerful and effective. It is well to conserve such ambitions because without them there could be no effective conduct of organization. A department of public works would be merely an instrument by which such ambitions could be aligned and guided into a productive unit.

3. ON OVERHEADS

Present Government overheads are from two to four times as large as in private operations. Present engineering and public works appropriations carry nine sets of departmental overheads, which vary in percentage amount (a) according to the variable ideas of frequently changing departmental heads, and (b) according as the several functions are coordinate with or foreign to the principal duties of the several departments. In all except one of the present departments the public works functions are mere appendages without interrelation with the main purposes for which the departments were created.

As stated in Fact No. 1 there are now 39 independent standing organizations authorized to perform engineering and public works functions. We therefore have 39 sets of separate and distinct overheads, some of which grind out their toll perpetually and others occasionally. Under an efficiently organized department of public works there would be only 4 sets of overheads: engineering, architecture, research and law.

4. ON GOVERNMENT DUPLICATION

It is frequently asserted that the doing of the same work by two or more Government departments does not necessarily constitute duplication. Those who assert this are thinking about the actual work, which in one case may be on one kind of material and for one purpose, and in the second on another material or for another purpose. This is a minor matter in the realm of duplication. The real damage, waste and inefficiency lies in the upkeep and maintenance of a large number of organizations "ready to serve" in such capacity. We have discussed in Facts Nos. 3 and 4 the lines of duplication and the avoidance of this under a department of public works will constitute one of the most important measures of Federal economy that is comprised in the public works program.

5. ON NATIONAL DEFENSE

The business and professional men of the country who were summoned to Washington to conduct the business end of the great war found no Government organization capable of being expanded or adapted to war needs as to construction, materials, purchase, standardization or allocation. They were obliged to create new organizations, such as the War Industries Board and the Construction Division of the Army, with almost the degree of thoroughness that would have been necessary had there been no pre-existing government. A department of public works would supply all these deficiencies and furnish the nucleus of a war organization that could function on instant notice.

6. ON THE CORPS OF ENGINEERS, U. S. ARMY

This Corps is an unwisely untilized organization. It will not be necessary now, and it is hoped not in the future, to go into an analysis of its engineering performance in the civil lines to which it has been assigned. It is necessary to say, however, that the greatest engineers of the country, whose opinions are unquestionably authoritative and whose motives are beyond question, are united in the opinion that, however commendable may be their finished results, their work is much too costly, their procedure inefficient, and their training too narrow and inbred.

It is unfortunate that this truth can not be told of the Corps as an organization without inferentially reflecting on all the individual members. Nearly all of them are highly accomplished men, and some of them are good engineers in the lines in which they have for so many years been grooved. However, in a very tangible and emphatic way the individual engineer officer as a man among men, as a clean-minded, honorable, attractive personality totally fails to typify the organization to which he is bound. In our organization history there is no more striking example of the fact that a corps of men may not be the composite of the individuals that constitute it. If it were permissible to review the confidences that have been given on many occasions by engineer officers to their civilian friends the reasons would be very plain.

Many engineer officers have been frank enough to admit that the bone and sinew of their engineering work on rivers and harbors is the civilian engineer—the so-called "Assistant Engineer"—who remains on the job year after year, knows it from end to end and carries it through while his commissioned superiors come and reign and go. Army assignments of commissioned officers are arranged according to the calendar and not according to the state of the project. Having served for a time and having become familiar with many local things the engineer officer takes his way in obedience to orders from Washington. Of course it is wasteful and costly to "swap horses"

while crossing a stream, but it has never been totally destructive because the civilian engineer really behind the work is rarely disturbed.

As each newly assigned officer takes his chair in the front office the dependable civilian in the rear office interrupts his work long enough to teach his superior the things he ought to know and then returns to see the job through. If it were possible for Congress to give these civilian engineers immunity from military consequences and they could be induced to talk from their hearts, as they occasionally do, in seclusion, Congress would realize that it has created and is maintaining a "Junkerdom" whose counterpart could be found only in Berlin or its environments prior to November, 1918.

So, if the proposal to change the river and harbor improvements from military to civilian control finds objection because of alleged excellencies in the work under military jurisdiction in the past, the fact should be remembered that the achievements have really been civilian achievements and it is to the credit of many commissioned engineer officers that they proclaim the truth of this statement.

But there is a very constructive reason for the proposed change in the status of the Corps of Engineers, U. S. Army, as set forth in Section 3-B of the Jones-Reavis bill. That change should be made for the benefit of the Corps itself. The Jones-Reavis Bill seeks to bestow on the Corps of Engineers greater benefits than any legislation that has been before Congress in the last quarter century. Many members of that Corps will naturally denounce this statement, but the majority of them recognize it as true.

The Corps of Engineers is first of all a military organization to which civil work on rivers and harbors was assigned many years ago, and this work has since constituted the greater part of the occupation of the military engineers. The recent war created obsolescence in many lines of military practice. What has it done to military engineering?

In the old days military engineering was essentially a part of military strategy. The great permanent fortifications of the world constituted the bulk of military engineering. Wars are now fought by mobile armies. Nothing better illustrates the fact that the old military engineering is obsolete than the first advance of the German army to the Marne. It was not the engineering masterpieces of defense that turned back the divisions of Von Kluck. The fortifications in the way were either destroyed or enveloped in a short space of time. Von Kluck's defeat was the result of military strategy made possible by the quick transfer of forces in motor vehicles.

Some military engineering remains, but its requirements are relatively easy of accomplishment even by line officers or by men of intelligence in many lines of work. It has been said by an engineer officer who served throughout the war as an instructor of troops: "Give me a young engineer graduate of average intelligence and I will teach him all that remains of military engineering in a period of thirty days."

Engineering lies at the base of war operations, but it is not military engineering. The trenches, which formed the nucleus of defensive warfare in the late war, were temporary expedients to be used as long as progress in action made them useful and then abandoned for other trenches. They are not engineering works. Their location was generally fixed by line officers and their excavation was a matter of pick and shovel work. The real engineering of the war was the civil, mechanical, mining and electrical engineering with which civilian engineers have long been familiar, and which they almost alone conducted during the war. It consisted of transportation by highway, railway and air; also bridge building, water works construction, building construction, drainage and numerous other features familiar to the civilian engineer in practice. Automotive power was a tremendous factor, but every one will agree that that is not military engineering.

The most conclusive observation that can be made in this respect is that of the assignments of the Corps of Engineers during the war. Surely if military engineering had been a prominent factor every one of these highly qualified engineers would have been assigned to such duties. It will not be necessary to give an entire list of assignments, but those of a few of the most prominent military engineers will suffice. General Kuhn was placed in the line; General Seibert was first assigned to the line (it is said much against his own inclination) and subsequently made head of the Chemical Warfare Service in Washington; General Newcomer served for a part of the

war period as engineer in charge of rivers and harbors in this country and was subsequently assigned to duty as assistant to General Seibert; General Harts was provost marshal of Paris; General Biddle, after serving for a time as assistant chief of staff, was sent to London to command American troops in England; General Taylor was relieved from duty in France during the war and returned to this country to take charge of rivers and harbors. General Kutz was similarly relieved and placed in charge of Camp Humphreys. Generals Kelley and Connor were not given engineering duties. General Rose, who was successively promoted from captain to brigadier general during the war, was in charge of the General Engineer Depot—a business man's job. Many other instances might be cited. In other words, many of the most prominent and supposedly accomplished military engineers in the Army gave no military engineering service during the war. This must not be construed to their discredit, nor is the above recital made with such intent. The facts were that these accomplished men found more useful occupations in other lines than engineering. It is unquestionable that their superiors thought they could be spared from engineering duties and that the important and fundamental engineering work of the war could be better performed by others.

The great engineering functions of the war were those which civilian engineers are accustomed to handle. Naturally and wisely, therefore, such engineers who had given their lives to those specialties were assigned to that work. The reason why so many engineer officers were assigned to non-engineering positions during the war was because they were not fitted to the essential engineering of the great emergency. Why was this so?

The Corps of Engineers had, during previous years, save in notable exceptions, been deprived of training along the lines necessary to their engineering usefulness in the war. Their experience outside of purely military engineering had been with the rivers and harbors of the country. They had become familiar with river hydraulics, levees, dams, dredging and revetment. Such experience may have been useful at the ports of entry, but levees, dams, dredging and revetment were not a part of the requirements between the ports of entry and the fighting line. There were very good reasons why they were not experienced in bridge building, highway and railroad building, water supply engineering, etc., and why these positions had to be filled in the main by engineers from civil life. The members of the Corps of Engineers in the Regular Army can not be blamed for not having had the experience required by the war, because they had not been allowed to get that experience.

The Jones-Reavis bill proposes to correct all this. It does not destroy the Engineer Corps, but relieves it from highly specialized duties along the lines which will be of little or no value in war emergency. The bill provides that engineer officers shall be assigned to duty under the Department of Public Works along lines that will give them the training and experience required, and they will take and hold their positions therein not by reason of military rank, but by reason of personal fitness, comparatively scaled alongside of civilian engineers. What scheme could be better arranged to beget fitness in the engineer arm of the military establishment? Under such a program, when another great war comes, they can be utilized along war engineering lines rather than on such things as chemical warfare, provost marshalships and military administration. The people of the country who have, during long years, paid to equip these men for a particular service should find it possible to realize on that investment when the crisis comes.

No man is better qualified to give an opinion concerning the Corps of Engineers and its work than is General W. W. Atterbury, operating vice-president of the Pennsylvania Railroad Company. He has, for many years, been in charge of the great engineering works conducted by that railroad and is well known as one of our highest authorities on matters of engineering efficiency and organization. Throughout the late war he was in charge of transportation with the American Expeditionary Forces, and as such he derived an unusual opportunity to form an opinion concerning the Corps of Engineers. Therefore his testimony, given before the Senate Committee on Military Affairs on August 27, 1919, relative to Army reorganization, is significant. Concerning the Corps of Engineers Mr. Atterbury stated:

"Now, the Corps of Engineers. From the standpoint of the Army it is a mistake to take 'the cream off the jar of milk' and put them in the Engineer Corps. Then you send them off to a school, after which the engineers are put out on civil work. The result is that you have produced neither engineers nor soldiers. That is perhaps a little exaggerated, but I say that they are not engineers, because when out on general work their work is done by civilians. The work ordinarily done by the Corps of Engineers under the Treasury Department, buildings and river and harbor work, should be done by a civilian organization under a civilian department. The military engineering work, should be, of course, under the Corps of Engineers. I do not believe you ought to take the best men in the class, the men who stand highest in the class, for that purpose. The best engineer is not always the highest standing man in the class."

7. ON CONTRACTS AND SPECIFICATIONS

Peace-time contracts of the Government, whether for materials or construction services, have not been regarded as desirable. Some of our most reputable manufacturing establishments will not, in peace-time, take the trouble to bid on a Government contract. Many of our most reliable construction companies hold the same views. Of course there are notable exceptions, but it will be admitted that prior to the war the Government was seldom able to do business with the best and most reputable contractors of the United States.

The reasons are many and we have no time to go into all details, but we may sum up the situation by the reflection that no efficient business man or organization likes to do business with an inefficient business man or organization. The doing of such business is a hazard. A contract with an inefficient man is always speculative. Every contracting agency of the Government has its own standards. There is no uniformity in specifications and an entire lack of definition as to the interpretation of those specifications. Government contracts can not be otherwise than speculative. The prudent bidder must determine upon a unit price, fill in his legitimate profits and then add thereto the matter of insurance against Government hazard, in precisely the same way that insurance margins are filled in against unusual fire hazard, flood menace, foundation uncertainties, etc. Of course the Government must pay this hazard insurance or in lieu thereof give the contract to a bidder less responsible and willing to do business on a highly speculative basis.

What is the result? The Government can not get the benefit of a widely competitive field, in its contractual relations, and the only and inevitable result is that it pays more than it would if its contracts were on a sane and sound basis and attractive to every prospective contractor. There is one cure—consolidate the contracting agencies under a Department of Public Works, standardize the contracts and especially the interpretation thereof, so that every man or organization that bids on a Government contract will have a substantial standard which will guide him in his estimates. Cut away that Government hazard insurance in contracts which is costing the country many millions each year.

8. ON STANDARDIZATION

Almost every piece of Government construction is "tailor made." Of course there are some uniform standards as to methods and materials, but these are imposed by the state of the science or the trade rather than by initiatory efforts on the part of the large number of contract agencies of the Government. Materials of construction and, in a certain sense, designs should be standardized. This does not mean monotony in design. Materials and fittings as to design, quality, grade, dimensions, finish, etc., have hundreds of variations in Government specifications. This means waste and increased cost.

It involves an enormous aggregate amount of useless individual effort, time and expense in specification preparation and detail drafting; lost motion and waste in the extraction, production and application of special materials and in the manufacture of special equipment to produce those materials; it also prevents industries from keeping production well in advance of demand and assuring more constant employment of workmen; it also makes necessary the carrying of needlessly large stocks by manufacturers and thereby plays an important part in contributing to the high cost of building; it also prevents the wider use of materials and buildings best adapted to improve living and working conditions.

By reason of all this, Government contracts for materials and supplies in engineering and public works lines are, in at least 90 per cent of the cases, more costly than those on similar private work. All this is in large degree the result of present chaos in the administration of public works functions and can be corrected only by the coordination of these functions.

9. ON INTERNAL COMPETITION

There is now almost no consideration of proper sequence of public works projects or allocation of expenditures thereon. The majority of the public works agencies of the Government compete with each other before Congress for authority and appropriations, and that agency which by reason of superior legislative instincts or popular influence of its personnel can make the most plausible and convincing showing before Congress, or can bring to its aid the most powerful outside influences, is the one which secures the greatest measure of favor. The particular nature of the work, its benefits to the citizens or its proper standing in line of importance are not first considerations. Our participation in any single line of public works activity depends today more upon the legislative skill and attractive personality of the bureau chief than upon the relative merit and public need of the work itself. Having secured authority and appropriations the several Government agencies compete one with another for materials, supplies and labor, with the results already too familiar in the industrial world to require extended comment. A Department of Public Works would correct this.

10. ON EXTERNAL COMPETITION

The public works activities of the Government, especially in the matter of construction and supplies, should reciprocate with private activities. Large Government construction programs should, wherever the immediate public necessity is not involved, be restrained when, during "good times," the industrial activity of the country is high. Conversely, during "bad times," when private production demand is curtailed and the labor market is slack, the Government program should be intensified. This result can not be achieved unless the public works activities of the Government are under unified and considerate control as they would be under a Department of Public Works.

11. ON BUDGET

Among the underlying essentials of a budget system, are the proper appraisal and weighting of Government activities and their organized allocation. Without these no budget system can achieve complete success. Public works functions of the Government are a distinct branch which must be weighed and measured in any budget program. So long as these functions are, as at present, administered by nine separate departments such an appraisal can not be made. Under present conditions there must be created in the budget organization a suitably qualified engineering and economic overlord, who shall segregate the several public works items from out of the mass of budget details and constitute in actuality the fiscal and economic part of a public works department. Such a budget segregation would involve a properly qualified organization, which in itself would involve large duplication of costs, and lack the consideration and viewpoint which alone can follow from the immediate contact that a real department would have.

12. ON CHAOS IN OUR RIVERS:

The rivers of our country are the Nation's greatest industrial plant. They furnish transportation, power, irrigation and domestic water supply. They perpetuate swamps, define natural and political boundaries, and furnish sites for parks and places of recreation. They are the receptacles for city sewage. They rise in flood and destroy lives and property, and to compensate for this they harbor fish, which constitute a not insignificant portion of our food supply. They are essential to placer mining, to numerous industrial processes, to fire protection and to some kinds of engineering construction.

Rivers are rivers. They are a unit from source to mouth. They all run down hill, discharge the same water, and invoke the same hydraulic principles. Each problem that they present merges with every other, and there can be no final and satisfactory solution of one that does not defer to the requirements of every other. One may as well try to separate the functions of a hand or a foot from those of the remainder of the body. If there be any Government function that requires a single authority and sane, consistent and coordinated management, it is the function relating to rivers.

Water-power development is under:

(1) The Department of War: Corps of Engineers.

(2) The Department of the Interior:

- (a) The Geological Survey;
- (b) The General Land Office and, in certain cases,
- (c) The Reclamation Service;
- (d) The National Park Service;
- (e) The Bureau of Indian Affairs.

(3) The Department of Agriculture: The Forest Service.

If these rivers rise in flood:

(1) The warnings are sounded by the Department of Agriculture: The Weather Bureau.

(2) The amount of water is measured by the Department of the Interior; the Geological Survey in most cases and the Reclamation Service in others.

(3) And certain *ex post facto* observations and conclusions are delivered by the Department of War: The Corps of Engineers.

If these rivers are to be used for irrigation:

(1) Any public lands involved must be subject to the action of the Department of the Interior, the General Land Office, except

(2) if any lands in the national forests are involved, there must be approval of or interference by the Department of Agriculture, the Forest Service, or

(3) if any of the project occupies land in an Indian reservation there must be approval of or interference by the Department of the Interior, the Office of Indian Affairs.

(4) Furthermore, if the project be one of the Government's own then it is presided over by the Department of the Interior, the Reclamation Service,

(5) and then the whole thing may be subject to the consent of the Department of War, the Corps of Engineers, under the guise of interference with navigation and whether there be any actual navigation or not.

If it becomes necessary to make a river survey, that work may fall to any one of the following:

(1) The Department of War: Corps of Engineers.

(2) The Department of State; The International Boundary Commission.

(3) The Department of Commerce; The Coast and Geodetic Survey.

(4) The Department of Agriculture:

- (a) The Bureau of Roads and Rural Engineering.
- (b) The Forest Service.
- (c) The Bureau of Soils.
- (d) The Weather Bureau.

(5) The Department of the Interior:

- (a) The Geological Survey.
- (b) The General Land Office.
- (c) The Reclamation Service.

- (d) The Bureau of Indian Affairs.
- (e) The National Park Service.

If questions arise as to wet and overflowed lands the following departments find points of entrance:

(1) The Department of Agriculture: the Bureau of Roads and Rural Engineering.

(2) The Department of the Interior:

- (a) The Reclamation Service.
- (b) The Geological Survey.

(3) The Department of War: Corps of Engineers.

If an issue arises as to the deposit of sewage or other foreign matter, one or more of the following is concerned:

(1) The Department of the Treasury: The Bureau of the Public Health Service.

(2) The Department of War: The Corps of Engineers and the California Debris Commission.

(3) The Department of Agriculture: The Bureau of Public Roads and Rural Engineering; also the Forest Service.

(4) The Department of the Interior:

- (a) The Reclamation Service.
- (b) The Geological Survey.
- (c) The National Park Service.

(5) The Department of State: The International Joint Boundary Commission.

All of these departments operate independently. Instances of mutual working agreement are so rare as to cause comment. Each department has its own regulations and rules of procedure, its own ideas, specifications, methods and specific objects. The race for departmental supremacy is often more prominent than the object to be attained by the official activities.

Then, think of the overheads, the duplications, the cross-purposes, the multiple accounting and the technical and clerical help; also the duplicated property and equipment, the duplicated traveling expenses.

13. ON THE CONSTRUCTION DIVISION OF THE ARMY

See Fact No. 15.

14. ON ORGANIZATION UNDER H. R. 6649, S. 2232

The Jones-Reavis bill will coordinate under one authority the engineering, architectural and public works functions of the Government as follows:

(a) **Architecture:** All of the overheads, designs, contracts, specifications, drafting, inspection and superintendence of 14 of the 27 agencies listed under "Building Construction" on the table in Fact No. 4. These 14 agencies represent by far the greater part of the estimate for public buildings for the fiscal year 1921. Reasoning from analogous cases that have occurred in the industrial world there is no reason why at least 40 per cent of the expense now incurred for the above named items can not be saved. The standardization of material and equipment specifications discussed in Argument 8 may conservatively be expected to reduce the price now paid by the Government from 12 to 20 per cent, according to market conditions. The uniform contract and definite interpretation of specifications discussed in Argument 7 will surely reduce the cost of contract service—we do not know how much. The correction of internal and external competition discussed in Arguments 9 and 10 will markedly reduce costs and do its large share in the adjustment of fluctuation in labor demand and industrial production.

(b) **Engineering Construction:** All of the overheads, designs, specifications, drafting, inspection and superintendence in 10 of the 16 agencies listed under "Road Construction" on the table in Fact No. 4; also in 11 of the 19 agencies listed under "Hydraulic Construction." The savings and improvements indicated under Architecture (above) would follow quite closely in engineering construction. The chaos in our rivers discussed under

Argument 12 would be eliminated and the Corps of Engineers, U. S. Army, would be relieved from narrow specialization as discussed in Argument 6.

(c) **Engineering Research:** All of the research work in 15 of the 26 agencies listed under "Engineering Research" on the table in Fact No. 4. This would eliminate duplicate research and the overheads attached thereto, save money, and stabilize results.

(d) **Surveying and Mapping:** All of the survey and map work in 13 of the 26 map-making agencies listed under Fact No. 4, covering by far the greater proportion of the estimates for such work in 1921.

(e) **Public Land Functions:** Nine of the ten agencies having public land functions would be consolidated under one departmental authority, so that these closely related matters may have a common jurisdiction and not be distributed among 3 Federal departments as at present.

The foregoing results are but the first step, as discussed in Fact No. 7. It will be noted, under Section 7 of the Jones-Reavis bill, that the proposed organization of the Secretary of Public Works is designed to conform to future as well as present requirements and that four assistant secretaries, each qualified in specific lines shall coordinate and bring into efficient relation all of the functions, to the end that the work of the department shall be harmoniously and most economically performed and administered. These assistant secretaries will not be the chiefs of bureaus, but merely arms of the Secretary of Public Works. Were it possible to secure an omnipotent person as head of the department, assistant secretaries would not be necessary, but as at present, the world is not producing omnipotent men, it is necessary to give the Secretary of Public Works the advantage of specialized brains. The four assistant secretaries proposed would in effect be additional lobes of the Secretary's brain and a part of his official entity.

CONCLUSIONS.

If it were possible for the National Public Works Department Association to "sit in" on an audit of the expenditures of the nine Federal departments now performing public works functions and make a business survey of the results it would be relatively easy to substantiate by definite figures, all the claims herein made as to wastes and inefficiencies. But this cannot be done by "outsiders," nor even by "insiders" unless all the 39 accounts are brought together and submitted to analysis. Even then specific knowledge of the several operations would be necessary.

This statement should emphatically not be construed as a reflection on the integrity or the good intent of the devoted men who conduct the Government's public works business. Hundreds of them acknowledge all of the abuses described herein, and more. They would, if permitted, do much to correct the manifest evils, but as these are inherent in the laws which they are sworn to uphold they are as helpless as is the great body of Americans which advocates the passage of the Jones-Reavis bill. Only Congress, which is now deeply perplexed with the adjustment of our fiscal program, can remedy the basic conditions which are the real cause of this perplexity.

Each of the more than 100,000 qualified men who are affiliated in this movement bears testimony to some detail that has come under his observation, and which convinces him of the truth of the statements herein recorded as to Government wastes and inefficiencies. Here some engineer has seen a duplication which has doubled the necessary expenditure of the taxpayer; there some business man has noted some miscarriage of fundamental precept of business, with like consequences. And each and all are recognized as the inevitable result of the present chaos in our Federal organization. When this fundamental error is corrected we shall wonder why the old state of affairs was tolerated so long.

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